

REMARKS/ARGUMENTS

Claims 1-14 are pending in the application. Claim 1 has been amended to claim a polymeric substrate with a protective covering. Claims 2-9 have been amended to properly depend from Claim 1. Claim 10 has been amended to indicate that the substrate comprises polycarbonate. Claims 12 and 13 have been cancelled, Claim 14 has been amended to indicate that the substrate comprises a protective covering. Support for the amendments can be found in the original claims and at page 11 lines 24-26 and page 13, lines 20-22.

Rejection under 35 U.S.C. §§ 102(e)

Claims 10-12 stand rejected under 35 U.S.C. § 102(e) as anticipated by WO 01/98393 A1 as evidenced by U.S. Patent No. 4,292,350 to Kubitza et al. (hereinafter "Kubitza"). Applicants respectfully request reconsideration.

The present invention as recited in Claim 10 is directed to a process for the production of a protective covering comprising applying in a first step a two-component polyurethane adhesion promoter (primer) containing alkoxy silyl groups and applying in a second step an inorganic or inorganic-organic hybrid coating to a substrate comprising polycarbonate.

WO 01/98393 A1 discloses two-component coating compositions having a binder component (I) and a hardener component (II). Binder component (I) has at least one active hydrogen containing compound. Hardener component (II) has an isocyanate functional compound (A), and a silane oligomer (B) containing at least two free isocyanate groups. Example 4 illustrates an organic clearcoat composition over the two-component coating composition.

Kubitza discloses that conventional biurets of HDI have an isocyanate content of 23.5 weight percent and a functionality greater than 3.

Neither of WO 01/98393 A1 or Kubitza disclose applying a coating to substrate comprising polycarbonate as in the present claims.

In order to anticipate a claim, a prior art reference must disclose every limitation in the claim. As WO 01/98393 A1 does not disclose applying a coating to a substrate comprising polycarbonate, it cannot anticipate the claims and the rejection under 35 U.S.C. § 102(e) should be withdrawn.

Rejections under 35 U.S.C. §§ 103(a)

Claims 1-9 and 14 stand rejected under 35 U.S.C. § 103(a) as being obvious over WO 01/98393 A1 as evidenced by Kubitz in view of U.S. Patent No. 6,136,939 to Mager et al. (hereinafter "Mager"). The Examiner indicates that it would have been obvious to use the coatings disclosed in Mager as a top coating in WO 01/98393 A1 to provide anti-graffiti properties to the prepared articles. Applicants respectfully request reconsideration.

Mager discloses oligomers in organic solvents obtained by condensing identical or different cyclic organosilanes. The oligomers can be used to coat particles, coat plastics in order to improve mechanical strength, as an anti-graffiti coating on mineral and metallic substrates or organic coatings and for hydrophobising substrates, for example of stone or glass (col. 2, lines 25-32).

As indicated above, WO 01/98393 A1 discloses two-component coating compositions having a binder component (I) and a hardener component (II). Binder component (I) has at least one active hydrogen containing compound. Hardener component (II) has an isocyanate functional compound (A), and a silane oligomer (B) containing at least two free isocyanate groups.

The standard for obviousness under 35 U.S.C. § 103(a) was established in Graham v. John Deere Co., 383 U.S. 1 (1966). "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved." Graham, 282 U.S. at 17. In order to establish a *prima facie* case of obviousness under this standard, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second,

the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. Amgen v. Chugai Pharmaceutical Co. 18 USPQ 2d 1016, 1023 (Fed. Cir. 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. In re Wilson, 165 USPQ 494, 496, (CCPA 1970).

The scope and content of the prior art:

WO 01/98393 A1 discloses applying a primer coating containing alkoxy silyl groups followed by an organic coating over a metal, plastic or glass substrate.

Mager discloses applying a coating of oligomers obtained by condensing identical or different cyclic organosilanes over an organic coating over aluminum, porous, plastic, glass or stone substrates.

The scope of the present claims:

The present claims are directed to a polymeric substrate comprising polycarbonate with a two-component polyurethane coating containing alkoxy silyl groups as a first layer and an inorganic or inorganic-organic hybrid coating as a second layer.

Difference between the prior art and the claims at issue:

There is no disclosure in WO 01/98393 and/or Mager to coat a polycarbonate substrate with a first layer polyurethane coating containing alkoxy silyl groups and a second layer containing an inorganic or inorganic-organic hybrid coating.

There is no suggestion or incentive that would have motivated the skilled artisan to use the coating of oligomers obtained by condensing identical or different cyclic organosilanes disclosed in Mager in place of the organic second coating in WO 01/98393 A1 because WO 01/98393 A1 only discloses an organic coating and Mager only discloses a first organic coating, not a primer coating containing alkoxy silyl groups as required in WO 01/98393 A1.

There was no reasonable expectation, based on the combination of WO 01/98393 A1 and Mager that the claimed coating would protect polycarbonate substrates from mechanical damage and/or environmental influences, such as, for example, UV light or contamination, which are not susceptible to optical impairment

or inadequate stability due to weathering because neither reference discloses or in any way suggests the polycarbonate substrates or the unique combination of coating layers as is presently claimed.

Thus, the combination of WO 01/98393 A1 and Mager do not teach or suggest all of the limitations of the claims.

In the Advisory Action dated October 14, 2004 the Examiner indicated that Claim 1 did not require a polycarbonate substrate. Claim 1 has been amended to require a substrate comprising polycarbonate.

For the reasons set forth above, the claims are not obvious over the combination of WO 01/98393 A1 and Kubitza, and Mager because the combined disclosure fails to provide any motivation for a skilled artisan to make the claimed at least two-layer coating. Therefore, the at least a two-layer coating for polymeric substrates of the amended claims is not obvious over the combination of WO 01/98393 A1, Kubitza and Mager and the rejection of Claims 1-9 and 14 under 35 U.S.C. § 103(a) should be withdrawn.

Claim 1-9 and 13-14 stands rejected under 35 U.S.C. § 103(a) as being obvious over WO 01/98393 A1 as evidenced by Kubitza in view of CA 2,267,052. Applicants respectfully request reconsideration.

CA 2,267,052 discloses mixtures prepared from (A) at least one linear, branched, or cyclic monomeric organosilane having at least two silicon atoms with hydrolyzable and/or condensation-crosslinking groups in which the silicon atoms are bonded to one another through at least one carbon atom in a linking unit, and (B) at least one boron- and/or aluminum-containing compound. The mixtures can be applied to a substrate as a second coating over a first organic coating (col. 6, lines 54-67).

The scope and content of the prior art:

WO 01/98393 A1 discloses applying a primer coating containing alkoxy silyl groups followed by an organic coating over a metal, plastic or glass substrate.

CA 2,267,052 discloses applying a coating of organosilane over an organic coating.

The scope of the present claims:

The present claims are directed to a two-component polyurethane coating containing alkoxysilyl groups as a first layer and an inorganic or inorganic-organic hybrid coating as a second layer over a polycarbonate substrate.

Difference between the prior art and the claims at issue:

There is no disclosure in WO 01/98393 and/or CA 2,267,052 to coat a polycarbonate substrate with a first layer polyurethane coating containing alkoxysilyl groups and a second layer containing an inorganic or inorganic-organic hybrid coating as the amended claims require.

There is no suggestion or incentive that would have motivated the skilled artisan to use the coating of organosilanes disclosed in CA 2,267,052 in place of the organic second coating in WO 01/98393 A1 because WO 01/98393 A1 only discloses an organic coating and CA 2,267,052 only discloses a first organic coating, not a primer coating containing alkoxysilyl groups as required in WO 01/98393 A1.

There was no reasonable expectation, based on the combination of WO 01/98393 A1 and CA 2,267,052 that the claimed coating would protect polycarbonate substrates from mechanical damage and/or environmental influences, such as, for example, UV light or contamination, which are not susceptible to optical impairment or inadequate stability due to weathering because neither reference discloses or in any way suggests the polycarbonate substrates or the unique combination of coating layers as is presently claimed.

Thus, the combination of WO 01/98393 A1 and CA 2,267,052 do not teach or suggest all of the limitations of the claims.

For the reasons set forth above, the claims are not obvious over the combination of WO 01/98393 A1 and Kubitz, and CA 2,267,052 because the combined disclosure fails to provide any motivation for a skilled artisan to make the claimed at least two-layer coating on a substrate comprising polycarbonate. Therefore, the at least a two-layer coating for polycarbonate containing polymeric substrates of the amended claims is not obvious over the combination of WO 01/98393 A1, Kubitz and CA 2,267,052 and the rejection of Claims 1-9, 13 and 14 under 35 U.S.C. § 103(a) should be withdrawn.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being obvious over WO 01/98393 A1 as evidenced by Kubitza in view of Mager and CA 2,267,052. Claim 13 has been cancelled so the rejection is moot.

CONCLUSION

Applicants assert that the claims are now in form for allowance. In view of the above amendments and remarks, reconsideration of the rejections and allowance of Claims 1-11 and 14 are respectfully requested.

Respectfully submitted,

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